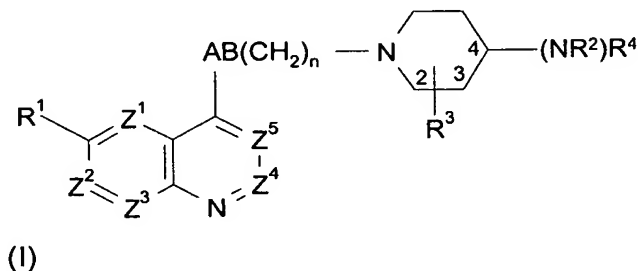


Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) a A compound of formula (I) or a pharmaceutically acceptable derivative thereof:



wherein:

one of Z¹, Z², Z³, Z⁴ and Z⁵ is N, one is CR^{1a} and the remainder are CH, or one or two of Z¹, Z², Z³, Z⁴ and Z⁵ are independently CR^{1a} and the remainder are CH;

R¹ and R^{1a} are independently hydrogen; hydroxy; (C₁₋₆)alkoxy optionally substituted by (C₁₋₆)alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two (C₁₋₆)alkyl, acyl or (C₁₋₆)alkylsulphonyl groups, CONH₂, hydroxy, (C₁₋₆)alkylthio, heterocyclylthio, heterocycliloxy, arylthio, aryloxy, acylthio, acyloxy or (C₁₋₆)alkylsulphonyloxy; (C₁₋₆)alkoxy-substituted(C₁₋₆)alkyl; halogen; (C₁₋₆)alkyl; (C₁₋₆)alkylthio; trifluoromethyl; trifluoromethoxy; nitro; azido; acyl; acyloxy; acylthio; (C₁₋₆)alkylsulphonyl; (C₁₋₆)alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two (C₁₋₆)alkyl, acyl or (C₁₋₆)alkylsulphonyl groups;

or when Z⁵ is CR^{1a}, R^{1a} may instead be cyano, hydroxymethyl or carboxy;

or R¹ and R^{1a} on adjacent positions may together form ethylenedioxy;

provided that when Z¹, Z², Z³, Z⁴ and Z⁵ are CR^{1a} or CH, then R¹ is not hydrogen;

R² is hydrogen, or (C₁₋₄)alkyl or (C₂₋₄)alkenyl optionally substituted with 1 to 3 groups selected from:

amino optionally substituted by one or two (C₁₋₄)alkyl groups; carboxy; (C₁₋₄)alkoxycarbonyl; (C₁₋₄)alkylcarbonyl; (C₂₋₄)alkenyloxycarbonyl; (C₂₋₄)alkenylcarbonyl;

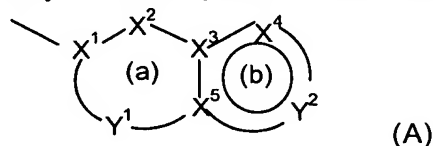
aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C₁₋₄)alkyl, hydroxy(C₁₋₄)alkyl, aminocarbonyl(C₁₋₄)alkyl, (C₂₋₄)alkenyl, (C₁₋₄)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₄)alkenylsulphonyl, (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋₄)alkenyloxycarbonyl or (C₂₋₄)alkenylcarbonyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R¹⁰; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R¹⁰; 5-oxo-1,2,4-oxadiazol-3-yl; halogen; (C₁₋₄)alkylthio; trifluoromethyl; hydroxy optionally substituted by (C₁₋₄)alkyl, (C₂₋₄)alkenyl, (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋₄)alkenyloxycarbonyl, (C₂₋₄)alkenylcarbonyl; oxo; (C₁₋₄)alkylsulphonyl; (C₂₋₄)alkenylsulphonyl; or (C₁₋₄)aminosulphonyl wherein the amino group is optionally substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl;

R³ is in the 2-, 3- or 4-position and is trifluoromethyl or is in the 2-position and is oxo; or R³ is in the 3-position and is fluorine or amino wherein the amino group is optionally substituted by: hydroxy; (C₁₋₆)alkylsulphonyl; trifluoromethylsulphonyl; (C₂₋₆)alkenylsulphonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenylcarbonyl; (C₁₋₆)alkoxycarbonyl; (C₂₋₆)alkenyloxycarbonyl; (C₁₋₆)alkyl; or (C₂₋₆)alkenyl; wherein a (C₁₋₆)alkyl or (C₂₋₆)alkenyl moiety may be optionally substituted with up to 2 groups R¹² independently selected from: halogen; (C₁₋₆)alkylthio; trifluoromethyl; cyano; carboxy; tetrazolyl; 2-oxo-oxazolidinyl; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R¹⁰; or 5-oxo-1,2,4-oxadiazol-3-yl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenyloxycarbonyl; (C₂₋₆)alkenylcarbonyl; hydroxy optionally substituted by (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl, (C₂₋₆)alkenyl; amino optionally mono- or disubstituted by (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₂₋₆)alkenylcarbonyl, (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylsulphonyl, (C₂₋₆)alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl; in addition when R³ is disubstituted with a hydroxy or amino containing substituent and carboxy containing substituent these may together form a cyclic ester or amide linkage, respectively;

R⁴ is a group -U-R⁵ where

U is selected from CO, SO₂ and CH₂ and

R⁵ is an optionally substituted bicyclic carbocyclic or heterocyclic ring system (A):



containing up to four heteroatoms in each ring in which

ring (a) is aromatic or non aromatic;

X¹ is C when part of an aromatic ring or CR¹⁴ when part of a non aromatic ring;

X² is N, NR¹³, O, S(O)_x, CO or CR¹⁴ when part of an aromatic or non-aromatic ring or may in addition be CR¹⁴R¹⁵ when part of a non aromatic ring;

X⁴ is N, NR¹³, O, S(O)_x, CO or CR¹⁴;

X³ and X⁵ are independently N or C;

Y¹ is a 1 to 3 atom linker group each atom of which is independently selected from N, NR¹³, O, S(O)_x, CO and CR¹⁴ when part of an aromatic or non-aromatic ring or may additionally be CR¹⁴R¹⁵ when part of a non aromatic ring,

Y² is a 2 or 3 atom linker group completing an aromatic ring, each atom of Y² being independently selected from N, NR¹³, O, S(O)_x, CO and CR¹⁴;

each of R¹⁴ and R¹⁵ is independently selected from: H; (C₁₋₄)alkylthio; halo; carboxy(C₁₋₄)alkyl; halo(C₁₋₄)alkoxy; halo(C₁₋₄)alkyl; (C₁₋₄)alkyl; (C₂₋₄)alkenyl; (C₁₋₄)alkoxycarbonyl; formyl; (C₁₋₄)alkylcarbonyl; (C₂₋₄)alkenyloxycarbonyl; (C₂₋₄)alkenylcarbonyl; (C₁₋₄)alkylcarbonyloxy; (C₁₋₄)alkoxycarbonyl(C₁₋₄)alkyl; hydroxy; hydroxy(C₁₋₄)alkyl; mercapto(C₁₋₄)alkyl; (C₁₋₄)alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl optionally substituted as for corresponding substituents in R³; (C₁₋₄)alkylsulphonyl; (C₂₋₄)alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally mono- or di-substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl; aryl; aryl(C₁₋₄)alkyl; aryl(C₁₋₄)alkoxy or

R¹⁴ and R¹⁵ may together represent oxo;

each R¹³ is independently H; trifluoromethyl; (C₁₋₄)alkyl optionally substituted by hydroxy, (C₁₋₆)alkoxy, (C₁₋₆)alkylthio, carboxy, halo or trifluoromethyl; (C₂₋₄)alkenyl; aryl; aryl (C₁₋₄)alkyl; arylcarbonyl; heteroarylcarbonyl; (C₁₋₄)alkoxycarbonyl; (C₁₋₄)alkylcarbonyl; formyl; (C₁₋₆)alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋₄)alkenyloxycarbonyl, (C₂₋₄)alkenylcarbonyl, (C₁₋₄)alkyl or (C₂₋₄)alkenyl and optionally further substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl;

n is 0 or 1;

each x is independently 0, 1 or 2

A is NR¹¹, O or CR⁶R⁷ and B is NR¹¹, O, SO₂ or CR⁸R⁹ and wherein:

each of R⁶, R⁷, R⁸ and R⁹ is independently selected from: hydrogen; (C₁₋₆)alkoxy; (C₁₋₆)alkylthio; halo; trifluoromethyl; azido; (C₁₋₆)alkyl; (C₂₋₆)alkenyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenyloxycarbonyl; (C₂₋₆)alkenylcarbonyl; hydroxy, amino or

aminocarbonyl optionally substituted as for corresponding substituents in R³; (C₁₋₆)alkylsulphonyl; (C₂₋₆)alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl;
or when n=1 R⁶ and R⁸ together represent a bond and R⁷ and R⁹ are as above defined;
or R⁶ and R⁷ or R⁸ and R⁹ together represent oxo;

provided that:

when A is NR¹¹, B is not NR¹¹ or O;

when A is CO, B is not CO, O or SO₂;

when n is 0 and A is NR¹¹, CR⁸R⁹ can only be CO;

when A is CR⁶R⁷ and B is SO₂, n is 0;

when n is 0, B is not NR¹¹ or O or R⁸ and R⁹ are not optionally substituted hydroxy or amino;

when A is O, B is not NR¹¹, O, SO₂ or CO and n=1; and

when A-B is CR⁷=CR⁹, n is 1

R¹⁰ is selected from (C₁₋₄)alkyl; (C₂₋₄)alkenyl and aryl any of which may be optionally substituted by a group R¹² as defined above; carboxy; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₆)alkenylsulphonyl, (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl or (C₂₋₆)alkenylcarbonyl and optionally further substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl; (C₁₋₆)alkylsulphonyl; trifluoromethylsulphonyl; (C₂₋₆)alkenylsulphonyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenyloxycarbonyl; and (C₂₋₆)alkenylcarbonyl; and

R¹¹ is hydrogen; trifluoromethyl, (C₁₋₆)alkyl; (C₂₋₆)alkenyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₂₋₆)alkenylcarbonyl, (C₁₋₆)alkyl or (C₂₋₆)alkenyl and optionally further substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl;

or where one of R³ and R⁶, R⁷, R⁸ or R⁹ contains a carboxy group and the other contains a hydroxy or amino group they may together form a cyclic ester or amide linkage.

2. (Original) A compound according to claim 1 wherein Z⁵ is CH, C-Cl or N, Z³ is CH or CF and Z¹, Z² and Z⁴ are each CH, or Z¹ is N, Z³ is CH and Z² and Z⁴ are each CH and Z⁵ is CH or C-Cl.

3. (Previously presented) A compound according to claim 1 wherein R¹ is methoxy and R^{1a} is H or when Z³ is CR^{1a} it may be C-F or when Z⁵ is CR^{1a} it may be C-F or C-Cl.
4. (Previously presented) A compound according to claim 1 wherein R² is hydrogen, carboxymethyl, hydroxyethyl, aminocarbonylmethyl, ethoxycarbonylmethyl, ethoxycarbonylallyl or carboxyallyl.
5. (Previously presented) A compound according to claim 1 wherein R³ is CF₃, fluoro, oxo or amino unsubstituted or substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl.
6. (Currently amended) A compound according to claim 1 wherein n is 0, A-B is CHOH-CH₂, NR¹¹-CH₂, NR¹¹-CO or CH₂-CH₂ and R¹¹ is hydrogen or (C₁₋₄)alkyl.
7. (Previously presented) A compound according to claim 1 wherein U is CH₂ and R⁵ is an aromatic heterocyclic ring (A) having 1-4 heteroatoms of which one is N or NR¹³, R¹³ is H if in ring (a) or in addition (C₁₋₄)alkyl if in ring (b), R¹⁴ and R¹⁵ are independently selected from hydrogen, halo, hydroxy, (C₁₋₄)alkyl, (C₁₋₄)alkoxy, trifluoromethoxy, nitro, cyano, aryl(C₁₋₄)alkoxy and (C₁₋₄)alkylsulphonyl.
8. (Previously presented) A compound according to claim 1 wherein R⁵ is 4,6-difluoro-indol-2-yl, 1H-pyrrolo[2,3-b]-pyridin-2-yl, 1H-pyrrolo[3,2-b]-pyridin-2-yl, 8-hydroxy-quinolin-2-yl, quinoxalin-2-yl, benzimidazol-2-yl, benzo[1,2,3]-thiadiazol-5-yl, benzothiophen-2-yl, 4,6-difluoro-1H-benzimidazol-2-yl, benzothiazole-5-yl, 3-(R)-2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-3-yl or [1,2,3]thiadiazolo[5,4-b]pyridin-6-yl.
9. (Original) A compound according to claim 1 selected from:
6-[(3*S*,4*R*)-3-fluoro-1-[(*R*)-2-hydroxy-2-(6-methoxyquinolin-4-yl)-ethyl]piperidin-4-ylamino)methyl]-[1,2,3]thiadiazolo[5,4-b]pyridine and 6-[(3*R*,4*S*)-3-fluoro-1-[(*R*)-2-hydroxy-2-(6-methoxyquinolin-4-yl)-ethyl]piperidin-4-ylamino)methyl]-[1,2,3]thiadiazolo[5,4-b]pyridine;
5-[(3*S*,4*R*)-3-fluoro-1-[(*R*)-2-hydroxy-2-(6-methoxyquinolin-4-yl)-ethyl]piperidin-4-ylamino)methyl]-benzo[1,2,3]thiadiazole and 5-[(3*R*,4*S*)-3-fluoro-1-[(*R*)-2-hydroxy-2-(6-methoxyquinolin-4-yl)-ethyl]piperidin-4-ylamino)methyl]-benzo[1,2,3]thiadiazole;
{3-Fluoro-1-[(*R*)-2-hydroxy-2-(6-methoxy-[1,5]naphthyridin-4-yl)-ethyl]-piperidin-4-yl}-[1,2,3]thiadiazolo[5,4-b]pyridin-6-ylmethyl-amine Diastereoisomer 1;
or a pharmaceutically acceptable derivative thereof.

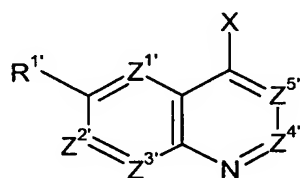
10. (Original) A method of treatment of bacterial infections in mammals, particularly in man, which method comprises the administration to a mammal in need of such treatment an effective amount of a compound according to claim 1.

11. (Cancelled)

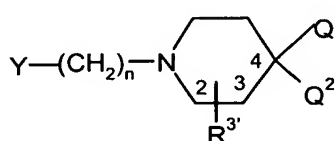
12. (Original) A pharmaceutical composition comprising a compound according to claim 1, and a pharmaceutically acceptable carrier.

13. (Original) A process for preparing compounds according to claim 1, which process comprises:

reacting a compound of formula (IV) with a compound of formula (V):



(IV)



(V)

wherein n is as defined in formula (I); Z1', Z2', Z3', Z4', Z5', R1' and R3' are Z1, Z2, Z3, Z4, Z5, R1 and R3 as defined in formula (I) or groups convertible thereto;

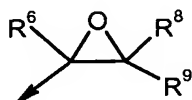
Q1 is NR2'R4' or a group convertible thereto wherein R2' and R4' are R2 and R4 as defined in formula (I) or groups convertible thereto and Q2 is H or R3' or Q1 and Q2 together form an optionally protected oxo group;

and X and Y may be the following combinations:

- (i) X is A'-COW, Y is H and n is 0;
- (ii) X is CR6=CR8R9, Y is H and n is 0;
- (iii) X is oxirane, Y is H and n is 0;
- (iv) X is N=C=O and Y is H and n is 0;
- (v) one of X and Y is CO2RY and the other is CH2CO2RX;
- (vi) X is CHR6R7 and Y is C(=O)R9;
- (vii) X is CR7=PRZ3 and Y is C(=O)R9 and n=1;
- (viii) X is C(=O)R7 and Y is CR9=PRZ3 and n=1;
- (ix) Y is COW and X is NHR11' or NR11'COW and n=0 or 1 or when n=1 X is COW and Y is NHR11' or NR11'COW;
- (x) X is C(O)=R6 and Y is NHR11' or X is NHR11' and Y is C(=O)R8 and n=1;
- (xi) X is NHR11' and Y is CR8R9W and n=1;

- (xii) X is $\text{CR}^6\text{R}^7\text{W}$ and Y is $\text{NHR}^{11'}$ or OH and $n=1$;
- (xiii) X is $\text{CR}^6\text{R}^7\text{SO}_2\text{W}$ and Y is H and $n=0$;
- (xiv) X is W or OH and Y is CH_2OH and $n=1$;
- (xv) X is $\text{NHR}^{11'}$ and Y is SO_2W or X is $\text{NR}^{11'}\text{SO}_2\text{W}$ and Y is H, and $n=0$;
- (xvi) X is $\text{NR}^{11'}\text{COCH}_2\text{W}$ or $\text{NR}^{11'}\text{SO}_2\text{CH}_2\text{W}$ and Y is H and $n=0$;
- (xvii) X is W and Y is $\text{CONHR}^{11'}$;

in which W is a leaving group, e.g. halo or imidazolyl; R^x and R^y are (C_{1-6}) alkyl; R^z is aryl or (C_{1-6}) alkyl; A' and $\text{NR}^{11'}$ are A and NR^{11} as defined in formula (I), or groups convertible thereto; and oxirane is:



wherein R^6 , R^8 and R^9 are as defined in formula (I);
and thereafter optionally or as necessary converting Q^1 and Q^2 to $\text{NR}^{2'}\text{R}^{4'}$; converting A', $\text{Z}^{1'}$, $\text{Z}^{2'}$, $\text{Z}^{3'}$, $\text{Z}^{4'}$, $\text{Z}^{5'}$, $\text{R}^{1'}$, $\text{R}^{2'}$, $\text{R}^{3'}$, $\text{R}^{4'}$ and $\text{NR}^{11'}$ to A, Z^1 , Z^2 , Z^3 , Z^4 , Z^5 , R^1 , R^2 , R^3 , R^4 and NR^{11} ; converting A-B to other A-B, interconverting R^1 , R^2 , R^3 and/or R^4 , and/or forming a pharmaceutically acceptable derivative thereof.

- 14. (New) A compound according to claim 5 wherein R^3 is fluoro.
- 15. (New) A compound according to claim 14 wherein R^3 is fluoro in the 3- or 4-position.
- 16. (New) A compound according to claim 15 wherein R^3 is 3-fluoro.
- 17. (New) A compound according to claim 16 wherein the 3-fluoro is cis to $(\text{NR}^2)\text{R}^4$.